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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/645,719

08/20/2003

Daniel C. Sawyer

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7590

11/15/2006

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EXAMINER

MILLER, DANIEL H

ART UNIT

PAPER NUMBER

1775

DATE MAILED: 11/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/645,719

Applicant(s)

SAWYER ET AL.

Examiner

Daniel Miller

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/25/2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spinney (U.S. 3,661,687) in view of Bainbridge et al (U.S. 6,357,054 B1).

Spinney teaches a multilayered artificial turf having a top layer simulating real grass (figure 2). The sports surface uses a foam backing (14) , as required in claim 2, comprising closed celled, as in claim 3, disposed between grass like fibers and a base material (column 2 line 45-60). Spinney is silent as to the playing field having an artificial turf top or being composed of beads.

Bainbridge teaches a protective padding used for protecting athletes (abstract). Bainbridge teaches the padding layer comprises a porous, breathable pad for use as protective padding to absorb the force of an impact while allowing liquids and air to freely pass through the pad, said pad having a plurality of discrete beads of substantially inelastic and waterproof material wherein portions of adjacent beads abut one another and other portions of said adjacent beads are spaced from each other to create interstitial spaces, at least some of said adjacent beads being fused together at

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the abutting portions thereof wherein said beads are made of closed-cell foam and wherein said pad further includes an outer casing of porous, breathable material enclosing said plurality of beads (claim 1).

Bainbridge then teaches that in athletic fields today, the standard padding used is one or more sheets or layers of foam. Foam in this regard has the distinct advantages of being lightweight and relatively inexpensive. For the most part, there are two types of such foam padding. The first is closed cell which has the advantage of not absorbing moisture or other fluids. Bainbridge clearly contemplates application of the disclosed padding material in athletic fields and is discussing it as analogues art.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Spinney by replacing the padding with the closed celled beads of Bainbridge because foam padding has the distinct advantages of being lightweight and relatively inexpensive and closed cell foams have the advantage of not absorbing moisture or other fluids, which would be advantageous in an artificial turf pad. Further, the padding in Bainbridge is placed on the body of an athlete to prevent injury upon impact with the ground, wherein the padding is in between the body and the ground. It would have been obvious to place the same padding on the ground, instead of on the body of an athlete, in between the body and the ground, to prevent injury of an athlete when impacting the ground.

Regarding claims 4, and 6-8, Bainbridge discloses a spherical bead of polypropylene foam (as in claim 4) used in a padding either fused or loosely packed together (abstract column 5 line 1-10). The beads are shown in figure 1 uniformly

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distributed (as in claim 7), in at least two rows (or levels as in claim 6) and are in fluid communication (of claim 8) (figure 3). Further, the pad is used for protection of athlete's thighs and heads (column 6 line 1-15).

Regarding claim 9 Spinney in view of Bainbridge teach all the limitations of claim 1 as above and Spinney further teaches option adhesive layers that are moisture proof disposed between the foam and base layers (see description of figure 2).

Claims 10-14, and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spinney in view of Bainbridge as applied to claim 1 above, and further in view of Dury (U.S. 4,501,420).

Spinneys in view of Bainbridge teach all the limitations of claim 1 as above, but are silent on the presence of feet or their properties.

Dury teaches a playing surface with a resilient carpet and a 2-layer cushion of bonded (beads) particulate rubber and foamed polyethylene enveloped in permeable fabric (column 1 line 50-65). The base layer consists of a flat layer and a plurality of drains (feet) that protrude into the ground (figure 1). The base layer comprises any suitable permeable material (column 3 line 1-2), instead of rubber particles (column 2 line 35-45).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the feet of Dury because they aid in providing drainage channels and use the beads of Bainbridge since they are a suitable water permeable material.

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With regard to the claim limitation regarding the shape of the channels in claims 14 and 18 and 19 it would be obvious to a person of ordinary skill to at the time of the invention as a matter of choice to choose that configuration absent persuasive evidence that the particular configuration was significant (In re Daily, 357 F.2d 669, 149 USPQ 47 (CCPA 1966)).

Further, with regard to the limitations of claim 12 and 16 requiring integrally joined members or modular members see In re Larson, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965) (A claim to a fluid transporting vehicle was rejected as obvious over a prior art reference which differed from the prior art in claiming a brake drum integral with a clamping means, whereas the brake disc and clamp of the prior art comprise several parts rigidly secured together as a single unit. The court affirmed the rejection holding, among other reasons, "that the use of a one piece construction instead of the structure disclosed in [the prior art] would be merely a matter of obvious engineering choice.")

Finally, although the references are silent as to the orientation of the feet when the turf is modularly linked together, absent a showing of criticality with respect to the orientation (result effective variables), it would have been obvious to a person of ordinary skill in the art at the time of the invention to optimize the orientation of the feet through routine experimentation. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claims 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Spinney in view of Bainbridge and further in view of Dury as applied to claim 10 above, and even further in view of (Internet ad of Silentwalk 2003).

Spinney in view of Bainbridge and further in view of Dury teach all the limitations of claim 10 as above but are silent on the use of non permeable barrier at the bottom of drain (feet).

Silentwalk teaches a non-water permeable barrier liner at the bottom of a floor padding (page 1).

The barrier is disposed on the bottom of the pad and it would be obvious to one of ordinary skill in the art at the time of the invention to place this liner at the bottom most portion of any floor covering or synthetic turf, including the bottom of a drain (feet) as in the present application because it to has a mat disposed underneath it that could utilize a water barrier.

Claims 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spinney in view of Bainbridge and further in view of Dury as applied to claim 1 and 17 above, and further in view of Mellor (U.S. 4,087,948).

Spinney in view of Bainbridge and further in view of Dury teach all the limitations of claim 1 and 17 as above but are silent on some borders being rounded, as in claim

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20, having a plurality of pieces that releasably attach to one another, as in claim 22, the border surfaces being flat, as in claim 21, with pieces being in a male female relationship, as in claim 23, and said pieces being mirror images of one another as in claim 24, and with regards to outer surfaces being smooth or flat as in claim 25.

Mellor teaches an interlocking flooring system with releasable pieces that have a male female relationship and are mirror images of one another, and depicts a flooring having flat edges (figure 1-3). Said edges allow the flooring to lock into place securely (see figure 1).

It would have been obvious to one of ordinary skill in the art to modify Spinney or Bainbridge or Dury in order to create a connection as in Melloy in order to securely connect adjacent pieces of turf to one another.

With regard to the claim limitation regarding the shape of the edges of the turf it would be obvious to a person of ordinary skill at the time of the invention as a matter of choice to choose that configuration absent persuasive evidence that the particular configuration was significant (*In re Daily*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966)).

Claims 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spinney in view of Bainbridge as applied to claim 1 above, and further in view of Layman et al (U.S. 4,489,115).

Spinney in view of Bainbridge teach all the limitations of claim 1 as above but are silent on having any means of attaching various ends of a synthetic turf including, a

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plurality of pieces that are releasable attach to one another as in claim 22, with pieces being in a male female relationship as in claim 23.

Layman teaches a synthetic turf having an interlocking releasable pieces that also has a male female relationship (figure 1).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the connecting system of Layman because Layman is also an artificial turf having a system to connect the turf to adjacent pieces and still be removable (abstract) and would provide the same benefit to the other recited turfs.

Claims 26-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spinney in view of Bainbridge as applied to claim 1 above.

Spinney in view of Bainbridge teach all the limitations of claim 1 as above but are silent as to their physical properties of claims 26-33.

Although the references are silent on the quantities recited in claims 26-33 which describe the density and thickness of the padding as well as bead diameter and percentage of air in padding, absent a showing of criticality with respect to those properties (result effective variables), it would have been obvious to a person of ordinary skill in the art at the time of the invention to optimize those characteristics through routine experimentation. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claims 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spinney in view of Bainbridge as applied to claim 1 above, and further in view of Dury.

Spinney in view of Bainbridge teach all the limitations of claim 1 as above but are silent as to the mat being porous as in claim 34 and to a porous fabric positioned between the padding and base layer as in claim 35.

Dury teaches one or more water permeable envelopes containing a water permeable base material (sand) (see abstract).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to make the surface permeable to water.

Response to Arguments

1. Applicant's arguments filed 9/25/2006 have been fully considered but they are not persuasive. The rejection under section 102 has been withdrawn. However applicant has argued there is no motivation to combine the references of Spinney and Bainbridge. The examiner is not persuaded by this argument. It is the examiners position that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Spinney by replacing the padding with the closed celled beads of Bainbridge because foam padding has the distinct advantages of being lightweight and relatively inexpensive and does not absorbing moisture or other fluids, which would be advantageous in an artificial turf pad. Further, the padding in Bainbridge is placed on

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the body of an athlete to prevent injury upon impact with the ground, wherein the padding is in between the body and the ground. It would have been obvious to place the same padding on the ground, instead of on the body of an athlete, in between the body and the ground, to prevent injury of an athlete when impacting the ground.

2. Regarding applicant's assertion that Spinney teaches away from the invention the examiner disagrees. The "conventional slab of foam" which applicant admits is taught by Spinney would inherently be porous and function similar to the beaded foam padding of applicant's invention. It is the substitution of Bainbridge's beaded pad for the foam pad of Spinney that allows the examiner to arrive at an obvious rejection of applicant's claimed invention. Applicant's other comments are not commensurate in scope with the claims.

3. Regarding applicant's argument against the combination of the Dury reference, the feet of Dury will inherently provide support by their position under the padding. Applicant's arguments are deemed unpersuasive.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Miller whose telephone number is (571)272-1534. The examiner can normally be reached on M-F.

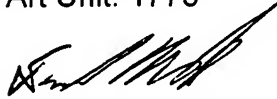
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on (571)272-1540. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Daniel Miller



JENNIFER MCNEIL
SUPERVISORY PATENT EXAMINER

11/13/06